

USSR

UDC 539.214;539.374

GORODETSKIY, V. N., BOGDANOV, V. N., BEKIN, N. G.

"On the Displacement of Material in a Longitudinally Asymmetric Rolling Process"

Sb. nauch. tr. Yaroslav. tekhnol. in-t (Collection of Scientific Works of Yaroslavl' Technological Institute), 1972, Vol. 31, pp 131-137 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V474)

Translation: The rate of longitudinal displacement of material in longitudinally asymmetric rolling of polymers is determined theoretically as applied to three cases: rolling with cylindrical nonparallel rolls, rolling with conical rolls, and bases directed toward the same side, and conical rollers with bases directed toward different sides. The material is characterized by the coefficient of Newtonian viscosity μ which is expressed in terms of the limiting value of the stress of the shift $\tau = A_{\text{erf}}(B, \gamma)$, as $\gamma \rightarrow \infty$. The unknown rate is determined by applying the formula for the average rate in the form of an integral which is a function of the coordinates of the input and output of the material from the deformation region. Formulas are also used reflecting the corresponding geometrical structures. 6 ref. M. I. Rozovskiy.

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UDC 539.214:539.374

KUZNETSOV, N. V., BOGDANOV, V. N., BEKIN, N. G.

"Certain Problems in the Theory of Rolling of a Porous Material"

Sb. nauch. tr. Yaroslav. tekhnol. in-t (Collection of Scientific Works of Yaroslavl' Technological Institute), 1972, Vol. 31, pp 38-44 (from RZh-Mekhanika, No 3, Mar 73, Abstract No 3V469)

Translation: The rolling of a porous powdery material is discussed theoretically. The rolling is assumed to be one-dimensional, the rate is taken to be constant with respect to the transverse cross section of the rolled material and normal stresses are also averaged over a transverse cross section assumed to be smooth. The movement of the powder mass under rolling is considered as the motion of a viscous incompressible liquid through a grid with a variable width of the gaps, thus imitating the compressibility of a porous material due to a decrease in cavities. The magnitudes of the contact tangential stresses are functions of displacements of powder particles over the surface of the roller and statistical characteristics of their rates are used to determine these. A technique is developed using probability laws for calculating the distribution of normal contact pressure over a capture arc in the rolling of the porous

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KUZNETSOV, N. V., et al, Sb. nauch. tr. Yaroslav. tekhnol. in-t, 1972, Vol. 31, pp 38-44

mass. An example is given for calculating contact pressures in the rolling of asbestos-friction molded masses. A graph is constructed showing the distribution of normal pressure of the asbestos mass on the roller along the arc of contact. It is pointed out that the calculated value of the rolling forces are in good agreement with experimental data obtained by measuring the deformation forces using hydraulic dynamometers. 9 ref. Ye. M. Tretyakov.

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UDC: 539.3

BOGDANOV, V. N.

"Paradoxes of the Planar Theory of Filtration"

Sb. Nauch. Tr. Yaroslav. Tekhnol. In-t [Collected Scientific Works of Yaroslavl Institute of Technology], 1972, No 59, pp 19-22 (Translated from Referativnyy Zhurnal Mekhanika, No 12, 1972, Abstract No 12V44, by N. M. Borodachev)

Translation: The first main problem of the planar static theory of elasticity is studied. It is affirmed that the conditions used as the basis for the proof of the theorem of uniqueness of the solution of this problem are not observed if the area occupied by the elastic body is semi-infinite and the sector of application of external loads is infinitely long. Several cases of loading of an elastic half plane and an infinite wedge are presented and known formulas are developed for determination of stresses applicable to these cases. For example, two such cases are analyzed: 1) a weightless elastic half plane with a triangular normal load $q=kx$ over a sector of length b (x axis directed along the boundary of the half plane); 2) a weightless half plane with a semi-infinite triangular normal load $q=kx$. If in plan 1 we assume $b \rightarrow \infty$, we arrive at plan 2. However, if in the formulas for voltages

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Bogdanov, V. N., Sb. Nauch. Tr. Yaroslav. Tekhnol. In-t, 1972, No 59, pp 19-22.

corresponding to plan 1 we assume $b \rightarrow \infty$, we do not produce the formula corresponding to plan 2. Based on this, the author formulates the first paradox. Four more paradoxes are produced by analyzing other loading plans. The author of the article believes that the reason for these paradoxes is the insufficiency of the boundary conditions at infinity. Six biblio. refs.

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BOGDANOV, V.N.

Social Hygiene & Health

SOME INDICES OF URBAN HOSPITAL CARE

UDC: 362.11(47+97)-23

Article by V.N. Bogdanov, Chair of Social Hygiene and Public Health Organization headed by Professor S.Ya. Freydlin, First Leningrad Medical Institute named I.P. Pavlov; Moscow, Sovetskoye Zdorov'ye, 1972, Russian, No 1, 1972, submitted 24 March 1972, pp 34-37

A number of scientific studies have been published in recent years (I.D. Bogatyrev, V.A. Minayev, S.Ya. Freydlin, K.A. Sheleminova, and others) dealing with organizing hospital care for the people. But all of them, as a rule, were conducted in very large cities (with over 500,000 population) of which there are not too many in the USSR, only 33, according to the 1970 census. The conclusions of the authors of these studies are not always applicable to medium-sized cities (100,000 to 500,000 population), whereas there are considerably more such cities in our country. According to the 1970 census there are 188 such cities including almost all of the country's oblast centers, with a total population of 38.3 million (32% of the population of all cities).

On the basis of these considerations, we decided to investigate some of the indices of hospital care in one of these medium-sized cities (the oblast center of Bryansk). In 1966, there were 23 hospitals with a total of 4,937 beds operating in Bryansk; 85,336 patients (not counting mental cases) were treated in these institutions; 17,159 (20.1%) were rural residents. During that year, 1141 beds were occupied by rural residents, and as a result, within the official availability of hospital beds for the urban population of Bryansk constituted 1517 beds per 1,000 population, the actual availability constituted 11.7 beds.

Occupancy of hospital bed resources averaged 320.9 days for 1/2 of the city's hospitals, with a range of from 405 days at the municipal dermatovenerological dispensary to 246 days in the infectious disease hospital. The index of hospitalization is relatively low (16.2%). Municipal hospitals play the leading part in hospital care; 65.9 percent of all patients requiring hospital medical care are hospitalized there. Hospitalization is effected in accordance with a decentralized system, since the small number of hospitals makes it usually possible to attach the polyclinics directly to such hospitals.

URS 58275-
21 Feb 73

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UDC: 621.791.03

BOGDANOV, V.N., and VILK', V.I. All-Union Scientific Research Institute of Electric Welding Equipment

"Work of the All-Union Scientific-Research Institute of Electric Welding Equipment in Developing Welding Equipment"

Kiev, Avtomaticheskaya Svarka, No 5, May 70, pp 25-28

Abstract: A report is presented on the work of the All-Union Scientific-Research Institute of Electric Welding Equipment, organized 17 years ago in Leningrad, in creating equipment for arc and electric contact welding, developing the technology and equipment for plasma welding, cutting, and other methods for the treatment of metals, and investigation new types of welding and developing the required equipment. In the mechanization and automation of arc welding, the Institute has contributed to the improvement of the ADFG-500 and ADF-500 automatic machines and has developed new types of equipment (the ADA-300 and ADA-500 for compressed arc welding, ADFG-500 automatic machine for gas-shielded consumable electrode welding, the ADTG-600 for welding aluminum and its alloys by a three-phase arc, and the USD-305 universal type device for joining metals by plasma arc). The Institute developed the MTV-63 machine for spot welding of steel piles 12 X 3 mm thick and aluminum sheets 2 X 5 mm thick. For the plasma welding cutting, and surface treatment of various steels, cast iron, and nonferrous

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BOGDANOV, V.N., et al., *Avtomaticheskaya Svarka*, No 5, May70, pp 25-28

metals (aluminum, copper), the APGS-1201, universal automatic machine was constructed. It operates on 380-volt AC current, has an intake of up to 300 kilowatts, is equipped with two torches using 1000 amperes (for welding) and 1500 amperes (for cutting), and is water-cooled. The automatic machine can cut sheet up to 200 mm thick at a rate of 5-70 m/hr, weld thick-walled billets and perform surface treatment of metals with a productivity of up to 3 kilogram force/minute at depths of the removable layer of up to 30 mm. A new process developed by the Institute is spin welding, which is used in various branches of industry. The Institute has also made contributions in copper and aluminum cold welding and produced the MSKhS-120 machine for this purpose. It has also created several machines for ultrasonic welding, among which the MTU-0.4 is outstanding.

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Coatings

USSR

UDC: 546.882'811:548.522

PETRUSEVICH, I. V., KOZLOV, F. N., BOGDANOV, V. P., NISEL'SON, L. A.

"Production of Nb_3Sn Coatings from the Gas Phase"

Moscow, Izvestiya Akademii Nauk SSSR, Neorganicheskiye Materialy, No 6, Jun 73, pp 952-955.

Abstract: Coatings of Nb_3Sn were produced on a moving strip of nickel by reduction of $NbCl_5$ and $SnCl_4$ from the gas phase. The dependence of coating thickness and yield on strip movement rate through the experimental apparatus is presented in tabular form. In the apparatus used, varying strip movement rate from 5 to 25 cm/min caused the coating thickness to decrease from 10.8 to 0.6 μ . Joint reduction of the higher chlorides of Nb and Sn by hydrogen in continuous apparatus used was determined by coating thickness as a function of strip movement rate, hydrogen concentration and gas stream velocity. The composition and structure of the Nb_3Sn coatings were found to be homogeneous along the length of the tape. The temperature at which the coatings convert to the superconducting state is 17.7° K.

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USSR

UDC 621.57.041-213.3-752:621.565.92

BOGDANOV, V. P., MOROZOV, S. A., KOLOSOV, S. V., SVYATNYY, V. I.

"Vibration Spectrum of Household Refrigerator Compressors as a Function of Their Defects"

Moscow, Kholodil'naya Tekhnika, No 6, 1971, pp 19-22

Abstract: A study is made of the relation between the vibration characteristics of the household refrigerator compressor DK12-1010 and its defects and failures. The vibration spectra of the compressor for one revolution of the crankshaft are presented, and a mathematical analysis of them is performed. Both artificially induced and ordinarily occurring defects and failures are considered. Division of the signal in time does not permit determination of all types of defects in the compressor since more than one defect can occur in certain intervals. Further separation of the signal within the intervals by means of filters and application of devices realizing elementary logical functions to separate defects generating the same frequencies permit analysis of all types of defects by their vibration characteristics. The same type of diagnostic device can be extended to all types of compressors.

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USSR

UDC: 8.74

GRINCHENKO, N. K., BOGDANOV, V. S.

"Development of a Procedure for Access to Several Digits of a Variable in ODRA-ALGOL Language"

Tr. Ryazan. radiotekhn. in-ta (Works of Ryazan Radio Engineering Institute), 1972, vyp. 30, pp 189-192 (from RZh-Kibernetika, No 7, Jul 73, abstract No 7V625 by V. Mikheyev)

Translation: The use of digital computers on various stages of the design of complex electronic circuits has led to the development of a number of topological methods based on using the theory of graphs. The information on the graph is fed to the computer in the form of incidence matrices, contiguity matrices, or matrices which describe the distribution of values of functions given on the set of vertices or arcs of a graph. For complicated electronic circuits the number of matrix elements may reach several thousand. At the same time, it is not efficient to use an entire memory cell for storing one matrix element. In this connection the problem of data compression arises. This problem can be solved if the appropriate algorithms are recorded in the command system

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GRINCHENKO, N. K., BOGDANOV, V. S., Tr. Ryazan. radiotekhn. in-ta, 1972, vyp. 30, pp 189-192

of a given computer, which involves certain difficulties due to the complexity of the algorithms to be realized. At the same time, ALGOL-60 language, which is convenient for realizing design algorithms, does not provide for access to several digits of a variable. The authors consider development of a procedure for access to several digits of a variable in ODRA-ALGOL, which is a specific representation of ALGOL-60 for the ODRA-1204 digital computer. The synthesis of procedures for access to several digits of a variable presupposes that a method has been developed for addressing groups of digits of a variable and that the relation has been established between the number recorded in the corresponding digits of the variable, and the value of the variable itself treated as a number.

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1/2 010

UNCLASSIFIED

PROCESSING DATE--20NDV70

TITLE--PMR STUDY OF THE TAUTOMERISM OF MERCAPTOALDIMINES OF THE FURAN
SERIES -U-

AUTHOR-(03)-GUGDANDI, V.S., DANYUSHEVSKIY, YA.L., GOLDFARB, YA.L.

COUNTRY OF INFO--USSR

B

SOURCE--IZV. AKAD. NAUK SSSR, SER. KHIM. 1970, (3), 675-8

DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--HYDROGEN BONDING, STEREOCHEMISTRY, MOLECULAR STRUCTURE,
DIMETHYL SULFOXIDE, HETEROCYCLIC OXYGEN COMPOUND, HETEROCYCLIC NITROGEN
COMPOUND, MERCAPTAN, FURAN, ORGANIC COMPLEX COMPOUND

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--3006/1361

STEP NO--UR/0002/70/000/003/0675/0678

CIRC ACCESSION NO--AP0135035

UNCLASSIFIED

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UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0135035

ABSTRACT/EXTRACT--(U) GP-D- ABSTRACT. PMR SPECTRA WERE REPORTED FOR IIR
EQUALS H, CYCLOHEXYL, BETA NAPHTHYL, PH PHCH SUB2). I EXIST
PREDOMINANTLY IN THE TAUTOMERIC FORM SHOWN ABOVE. THE INTERNAL H BOND
IN THE CHELATE CYCLE IS LESS STRONG THAN IN THE TYIOPHENE ANALOGS AS A
RESULT OF WHICH IT OFTEN BREAKS, IN PART UNDER INFLUENCE OF POLAR
SOLVENTS SUCH AS ME SUB2 SO, WHILE IN THE THIOPHENE ANALOG NO SUCH
CHANGE TAKES PLACE. THE CHEM. SHIFT OF H PRIME1 PROTON IN I DEPENDS ON
N SUBSTITUENTS AND ITS LARGEST VALUE IS FOUND WITH ARUM. SUBSTITUENTS.
AT ELEVATED TEMP. THE EQUIL. OF TAUTOMERS SHIFTS TOWARD FORMS WITH C:NR
GROUPING AND THOSE WITH SH HYDROGEN BONDED TO N. FACILITY:
INST. ORG. KHIM. IM. ZELINSKOGO, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC: 621.373.826:623

BOGDANOV, V. V., BRYKOV, V. G., MATROSOV, V. I., MOCHALOV, A. V., MYRBAYEV, D. K., SAYDOV, P. I., SHCHERBAKOV, Yu. A.

"Fundamental Problems in Developing a Laser Gyroscope"

Izv. Leningr. elektrotekhn. in-ta (News of Leningrad Electrical Engineering Institute), 1972, vyp. 101, pp 69-74 (from NZh-Radiotekhnika, No 12, Dec 72, abstract No 12D499 [résumé])

Translation: The principal physical relations which define the working characteristic of a gyroscope are examined. Technical requirements are formulated for the elements and parts of a laser gyroscope as implied by these physical relations. The results of an investigation of the zone of capture of the instrument are presented as well as one of the methods of reducing the threshold sensitivity -- Zeeman effect. Bibliography of 3 titles.

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BOGDANOVA, V. V., Leningrad

"Universal Equations of Laminar Boundary Layer of a Rotating Wing"

Moscow, Izvestiya Akademii Nauk SSSR, Mekhanika Zhidkosti i Gaza, No. 2, March-April, 1971, pp 84-93

Abstract: The motion of incompressible fluid in the boundary layer of a wing uniformly rotating about an axis normal to the span is analyzed.

The parametric method of solution is used. Three series of parameters controlling the boundary layer characteristics are used. A system of universal equations is established and integrated in a wide range of parameters.

The effects of rotation on separation and other characteristics of the boundary layer are derived.

Numerical examples show how velocity profiles in the boundary layer can be obtained from the subject system of equations.

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USSR

B
UDC 532.574.2:531.787(088.8)

BOGDANOV, V. V.

"Aerometric Collector for Measuring Nonsteady-State Pressures in a Gas Flow"

USSR Author's Certificate No 241764, filed 8 Dec 67, published 2 Sep 69)
(from RZh-Metrologiya i Izmeritel'naya Tekhnika, No 3, Mar 1970, Abstract No
3-32-718P)

Translation: The proposed collector is equipped with an external tube, concentric with respect to the collector, at one end of which a throttling bushing with radial through openings arranged along the periphery have been placed, and the circular gap of the collector part of the tube is plugged. This execution of the collector makes possible higher dynamic precision and reduces nonlinear distortions in taking measurements.

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AA0043304

BOGDANOV

V. V.

UR 0482

Soviet Inventions Illustrated, Section II Electrical, Derwent,

241764 AEROMETRIC RECEIVER for measuring non-stationary pressures in a gas flow, is in the form of a receiving tube 1 and concentrically fitted outside of it tube 2. At the end of the receiving tube 1 is fitted a sleeve 3 with holes bored radially to the walls 4. The ring clearance is covered by sleeve 5. The changes of pressure taken up by the receiver tube 1 are conveyed to a pressure recorder. Simultaneously these variations of pressure pass through the holes and clearance between the reducing sleeve 3 and outside tube 2 in the volume formed by the outside tube 2 and receiver 1. By manipulating the clearance slit, a stage is reached when the blind end of tube stops reacting to the pressure changes.

8.12.67 as 1201909/26-10.V.V.BOGDANOV (2.9.69)

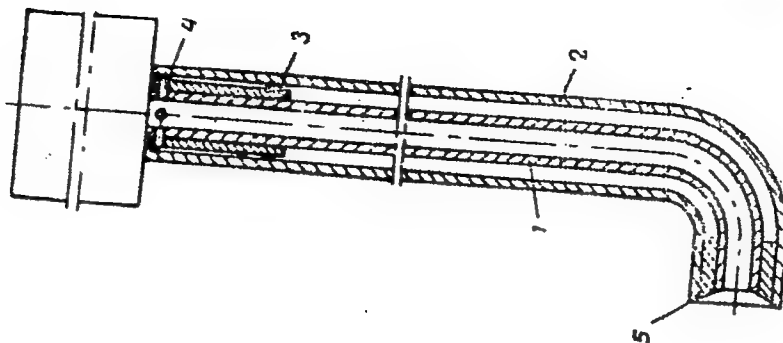
Bul 14/18.4.69. Class 42k. Int.Cl.G 01 1.

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UDC 621.316.722.1(088.6)(47)

BOGDANOV, V.V., KACANSKIY, R.A.


"Device For Conversion Of A-C Voltage Into D-C"

USSR Author's Certificate No 248057, Filed 9 July 62, Published 2 Aug 70 (from
RZh--Elektronika i yeye primeneniye, No 8, August 1970, Abstract No 248057)

Translation: A regulated rectifier is described which contains a power supply, a charging choke, a charging semiconductor diode, a controllable element (thyatron), an energy storage device (artificial long line), a pulse transformer, and a high-voltage rectifier. In order to guarantee automatic stabilization of the output voltage, a charging choke is provided with an additional winding which is connected via the controlled resistances and a RC-circuit to the output of the device. The controlled resistance is made in the form of two electron tubes, the anodes of which are subconnected to the ends of the additional winding, the cathodes are connected among themselves, and the control grids are connected among themselves and connected to the RC-circuit. 1 ill. N.S.

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1/2 017 UNCLASSIFIED PROCESSING DATE--13NOV70
TITLE--A.C. TO D.C. CONVERTER -U-
AUTHOR--(02)-BOGDANOV, V.V., KAZANSKIY, R.A. 
COUNTRY OF INFO--USSR
SOURCE--USSR 248057
REFERENCE--OTKRYTIYA, IZOBREI., PRGM. OBRATSY, TOVARNYE ZNAKI, NR 23
DATE PUBLISHED--05JAN70

SUBJECT AREAS--ELECTRONICS AND ELECTRICAL ENGR., ENERGY CONVERSION
(NON-PROPULSIVE)
TOPIC TAGS--PATENT, CODE CONVERTER, VOLTAGE STABILIZATION, THYRATRON

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3004/0306 STEP NO--UR/0482/70/000/000/0000/0000
CIRC ACCESSION NO--AA0131017
UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AA0131017

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. MICROFICHE OF ABSTRACT CONTAINS GRAPHIC INFORMATION. A.C. TO D.C. CONVERTER INCLUDES AUTOMATIC STABILIZATION OF OUTPUT VOLTAGE. ENERGY STORAGE UNIT (5) FORMS A RESONANT CIRCUIT WITH CHOKE (2) AND IS CHARGED FROM POWER SUPPLY (1). AS THYRATRON (4) IS TRIGGERED, THE STORAGE UNIT IS DISCHARGED THROUGH (4) AND THE PRIMARY WINDING OF HIGH VOLTAGE PULSE TRANSFORMER (6). THE OUTPUT PULSES ARE RECTIFIED BY (7) INTO A HIGH DIRECT VOLTAGE. PART OF THIS VOLTAGE IS FED TO THE CONTROL GRID OF VALVES (10, 11) VIA VOLTAGE DIVIDER (12, 13) AND RC NETWORK (14). AN OUTPUT VOLTAGE DEVIATION FROM THE STABILIZED LEVEL CAUSES THE OPERATING CONDITIONS OF VALVES (10, 11) TO CHANGE BY WHICH THE RESONANT CIRCUIT LOSSES ARE AFFECTED. AS A RESULT, THE ENERGY CONTENT OF THE STORAGE UNIT AND THE OUTPUT VOLTAGE LEVEL ARE INFLUENCED.

UNCLASSIFIED

USSR

UDC: 621.791:62-415.62-42

KOCHUKOV, N. S. (Candidate of Technical Sciences), SMIRNOV, I. V.
(Technician), BOYDANOV, YE. M., BAEONIN, I. V. and SEMERIKOV, N. V.
(Engineers)

"Welding of Tee and Multi-Tee Sections From Sheet Metal"

Moscow, Svarochnoye proizvodstvo, No 12, Dec 71, pp 29-31

Abstract: Thin-walled tee shapes are finding ever-increasing application on account of lighter weight and greater rigidity. The recent trends and techniques of producing tee structures include automatic argon arc welding. Discussed here is the method of full-penetration welding to produce a convex (reinforced) weld (over 2 mm thick) successfully tested on various sheet materials (0.6-2 mm thick), including steels and alloys 1Kh18N9T, VZh-102, VNS-16, EI435, OT4-1, VT-5. The weld strength is rated on the basis of tensile and tear tests of the welded flange. In tensile tests the failures occurred along the transition zone; the tear-induced failures were in the parent metal indicating the significance of the reinforced weld.

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Acc. Nr:

A P0036432

Ref. Code: UR 0213

PRIMARY SOURCE: Okeanologiya, 1970, Vol 10, Nr 1, pp 86 - 98

Yu. A. BOGDANOV, O. G. KGZLOVA, V. V. MUKHINA

**DISTRIBUTION AND COMPOSITION OF SUSPENDED MATTER IN THE
NORTHERN AND CENTRAL INDIAN OCEAN**

Summary

Some results are presented of the studies of suspended matter collected with the aid of separation and membrane filtration from the ocean surface and from different ocean depths. The distribution of suspended matter in the surface water is irregular. Its maximum amounts are confined to the near-shore areas, while in the central open parts of the ocean, to the areas of the rich development of planktonic organisms. Two types of the distribution of suspended matter in depth have been established depending on its material composition.

Different components of suspended material, siliceous, carbonate and terrigenous, are characterized and their distribution and role in the accumulation of sediments are determined.

D. n.

REEL/FRAME

19721276

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1/2 030 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--CYTOCHEMISTRY OF CHROMOSOME PAIRING IN MEIOSIS. II.
CYTOSPECTROPHOTOMETRY OF HISTONE AND DNA IN SPERMATOCYTES I OF
AUTHOR--(02)--ANTROPOVA, YE.N., BOGDANOV, YU.F. **B**
COUNTRY OF INFO--USSR
SOURCE--TSITOLOGIYA 1970, 12(3), 289-96 (RUSS)
DATE PUBLISHED-----70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--CYTOLOGY, DNA, SPERMATOGENESIS, SPECTROPHOTOMETRY, BIOLOGIC
STAIN, PROTEIN
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3002/0413 STEP NO--UR/9053/70/012/003/0289/0296
CIRC ACCESSION NO--AP0127984
UNCLASSIFIED

272 030

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NU--AP0127984

ABSTRACT/EXTRACT--(U) GP-0- TESTES FROM CATERPILLARS WERE FIXED IN 10PERCENTRAL NEUTRAL FORMALIN FOR 12 HR. USING DOUBLE BEAM CYTOSPECTROPHOTOMETRY THE AMTS. OF DNA (FEULGEN REACTION) AND HISTONE (STAINING WITH FAST GREEN AT PH 8.1-8.2) IN THE CELL NUCLEI WERE ESTD. AT THE EARLY STAGES OF SPERMATOGENESIS. THE AMT. OF DNA WAS MEASURED AT WAVELENGTHS OF 540 AND 514 MMU, THE AMT. OF HISTONES AT 598 AND 579 MMU. EVIDENCE WAS OBTAINED THAT THE DNA SYNTHESIS TERMINATES IN THE PREMEIOTIC INTERPHASE, WHILE HISTONE SYNTHESIS PROCEEDS UP TO THE PACHYNEMA. BEGINNING WITH PACHYNEMA THE RELATION HISTONE:DNA IS 1. THE PRESUMPTION THAT DEFICIENCY IN HISTONE DURING THE EARLY PROPHASE I OF MEIOSIS IS A CGNDITION FOR CHROMOSOME CONJUGATION WAS CONFIRMED. FACILITY: LAB. KARYOL., INST. MOL. BIOL., MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 678.027.5:678.674'524'42

FOMINA, L. L., GAVRILOVA, L. B., BOGDANOV, YU. N., and GOLOVACHEV, M. YE.

"Production of Multilayer Films Based on the Metal Plated Laysan"

Moscow, Plasticheskiye Massy, No 11, 1972, pp 38-40

Abstract: Production and some characteristic properties of various multilayer films with low gas permeability have been reported. The starting material consisted of polyethylene terephthalate films plated with aluminum either on one side or on both. Low density nonstabilized polyethylene served as the adhesive. The preparation of multilayer films was carried out by the extrusion method. The gas permeability of the multilayer films depends on the gas permeability of the components. The doubly plated films showed lower air permeability than parent films, provided that the thickness of the multilayer films was at least 10 μ . These films find application in the production of wrapping material, casings, boxes, etc.

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Powder Metallurgy

USSR

UDC 621.762:669. 18.95

PALATNIK, L. S., KAGAN, YA. I., SHILOV, I. F., BELYAYEV, YU. I., BOGDANOVA, A. F., KOBYLEV, P. P., KOLESNIK, B. I., and KUDINOV, D. D., Khar'kov Polytechnic Institute imeni V. I. Lenin

"On the Micro- and Macroheterogeneity of the SAS-1 Alloy"

Kiev, Poroshkovaya Metallurgiya, No 4, Apr 73, pp 22-28

Abstract: A study was made of the physical and chemical heterogeneity of the SAS-1 aluminum sintered alloy. The luminescence method of flaw detection using metallography was employed in the investigation of the physical heterogeneity of the alloy. The nature, dimensions and statistical distribution of pores appearing in the alloy in the process of its production and subsequent treatment were determined. The parameters of the luminescence method were corrected for the purpose of obtaining maximum sensitivity during the investigation of alloy microporosity. It was shown that with selected optimal conditions local pores with dimensions $10 \times 15 \times 25 \mu m$ can be reliably detected. The problems of the appearance of chemical heterogeneity of the alloy in micro- and macrovolumes were considered. Assumptions are advanced whose realization will result in a decreased number of macro- and micro-flaws in the SAS-1 alloy.

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USSR

UDC 612.66+612.833.81

OBRAZTSOVA, G. A., DOBROVOL'SKAYA, V. N., FEDOROV, V. K., ~~BOGDANOVA, A. Ye.~~
Institute of Physiology imeni I. P. Pavlov, Academy of Sciences USSR,
Leningrad

"The Relation of Training and Long-Term Memory in the Ontogenesis of Rats"

Moscow, Doklady Akademii Nauk SSSR, Vol 204, No 3, 1972, pp 763-765

Abstract: The ontogenetic method of investigation permits discovery of the functional characteristics of the brain activity from the time of their development when the relations are simpler and more available for analysis than in mature animals. A study was made of the characteristics of the relation of the education rate and the retention of the defensive conditioned reflex of active escape in the postnatal ontogenesis of a rat. The reproduction of the developed habit in the case of "complete" and "incomplete" training as a different mechanism [J. A. Deutsch, et al., *Nature*, No 213, 742, 1967] and with a known degree of training, changes in reflexes are almost never observed even after a prolonged interruption (6-8 months). Thus, the so-called "incomplete" training was used.

The development of a conditioned reflex of active escape takes place most rapidly in month-old baby rats. The dynamics of changes in the number of
1/2

USSR

OBRAZTSOVA, G. A., et al., Doklady Akademii Nauk SSSR, Vol 204, No 3, 1972, pp 763-765

conditioned reflexes of active escape from experiment to experiment and from combination to combination determined by the linear regression coefficient demonstrate that the least increment is observed in 12-month old rats. The period of optimal training in rats up to 1 year old does not coincide with the period of best retention of memory of the developed habit: when developing the escape reflex, the 1- and 2-1/2-month-old rats were the best, and when checking for retention they were the worst. The basis for poor memory in the defined ontogenesis period is the following: a) more pronounced nature of the induction relations at an early age, b) greater susceptibility of unreinforced associations to interfering effects, c) insufficient myelination of the gray matter of the cerebral cortex.

2/2

- 64 -

B
USSR

UDC 615.212.015.2:615.214.27.015.4:612.612.13.017-
089.5: 615.212+615.214.2-07:616.381-073.97

KYRIN, M. I., GILICH, N. A., YEREMOVA, M. V., and BOGDANOV, D. I.,
Chair of Faculty Surgery, First Moscow Medical School named I. I.
Sechenov

"Effect of Phentanyl and Dehydrobenzperidol on the Human Central
Nervous System"

Moscow, Khirurgiya, No 1, 1970, pp 95-101

Abstract: Changes in the bioelectrical activity of the human brain
vary with the depth of neuroleptic analgesia (NA). Light NA is
characterized by the dominance and decreased frequency of the alpha
rhythm; deep NA, by the dominance of the slow delta and theta waves.
The absence of desynchronization in the EEG and the continuous
galvanic reaction to light and pain suggest that the system of
afferent conduction is effectively blocked during NA. The isolated
use of dehydrobenzperidol produced only minor changes in the EEG
and total electrical activity. Phentanyl caused a shift toward
the low-frequency range, with the delta and theta waves predominat-
ing, and an increase in the total electrical activity.
L/c

- 73 -

1977

WIKH, A. I., et al., Moscow, Khirurgiya, No 1, 1976, pp 11-12.

Regeneration of the EEG waves in response to a light stimulation ceased under the influence of dehydrobenzoperidol alone or combined with phentanyll. Phentanyll promoted assimilation of high frequencies of light flashes and blocked the effect of dehydrobenzoperidol previously administered. This indicates that phentanyll has a central activating influence.

2/2

Acc. Nr: AP0044853

B

Ref. Code: UR0531

PRIMARY SOURCE: Khirurgiya, 1970, Nr 1, pp 95-101

ON THE EFFECT OF PHENTANYL
AND DEHYDROBENZPERIDOL ON THE HUMAN
CENTRAL NERVOUS SYSTEM

Kuzin, M. I.; Osipova, N. A.; Yefimova, N. V.; Bogdanova, E. A.

The results of analysis of the spontaneous bioelectric activity, frequency composition of the electroencephalogram, electroencephalographic and dermogalvanic reactions to pain and rhythmic light stimuli testify to inhibition in the system of afferent conduction with extinguishing of cortical and dermogalvanic reactions to external stimuli in this type of anesthesia.

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02

DI

REEL/FRAME
19771708

USSR

UDC 621.382.3:621.375.4

SAMOYLENKO, V. I., BOGDANOVA, G. A.

"Nonlinear Properties of the Input Circuit of a Transistor with Automatic Bias"

Tr. Mosk. aviats. in-ta (Works of Moscow Aviation Institute), 1970, vyp. 215, pp 150-160 (from RZh-Radiotekhnika, No 4, Apr 71, Abstract No 4D100)

Translation: The rectifying properties of the emitter-base gap of a transistor in a circuit with a common emitter are investigated. The current amplitude of the basic harmonic and the variation of the constant component of the current are determined. The input impedance of the input section of the transistor with automatic bias is found as a function of the input signal amplitude, the gain coefficient with respect to the transistor current, the magnitude of the resistance in the emitter circuit and other parameters. It is demonstrated that the variation of the input impedance of the transistor input circuit from the magnitude of the amplitude can be used to limit the oscillations in autooscillators operating in the undervoltage mode. The bibliography has 5 entries.

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- 8 -

USSR

UDC: 621.373.52:621.373.42

BOGDANOVA, G. A.

"Analysis of the Operation of a Transistorized Self-Excited Oscillator With a Nonlinear Master Tank Circuit"

V sb. Poluprovodn. pribory v tekhn. elektrosvyazi (Semiconductor Devices in Technical Electrical Communications--collection of works), Moscow, "Svyaz", 1970, pp 93-105 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1D333)

Translation: The author studies the stationary and continuous mode of operation of a low-frequency self-excited oscillator with nonlinear master tank circuit and automatic bias. Eight illustrations, bibliography of three titles. Resumé.

1/1

USSR

UDC 621.771.23.001.5

TITLYANOV, A. Ye., POLUKHIN, V. P., BOGDANOVA, G. P., and SAVINKINA, A. I.

"The Effect of Speed on Change in the Technological Parameters of the Dressing Process"

Moscow, Plasticheskaya Deformatsiya Metallov i Splavov, "Metallurgiya"
Publishing House, No. 64, 1970, pp 91-97

Translation: Investigation on the four-high 1700 mill showed that, with 08kp steel 0.5-2.0 mm thick, increasing the speed of dressing leads to an increase in reduction and metal pressure on the rolls. It is shown that increasing these quantities does not depend on preliminary adjustment and is established by the mechanical properties, thickness of the sheet, rigidity of the stand, and design of the liquid friction bearings. The results make it possible to determine the amount of preliminary adjustment established at low speeds, which corresponds to the optimal reduction state at working speed. Six illustrations, 13 bibliographic entries.

1/1

USSR

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TTILYANOV, A. Ye., POLUKHIN, V. P., BOGDANOVA, G. P., and SAVINKINA, A. I.

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Moscow, Plasticheskaya Deformatsiya Metallov i Splavov, "Metallurgiya"
Publishing House, No. 64, 1970, pp 97-103

Translation: It is shown that, at low reductions in the process of dressing 08kp steel, subsequent straightening lowers the value of a majority of mechanical properties and the depth of the hole when testing according to Eriksen. Taking into account the effect of straightening on mechanical properties of the dressed metal makes it possible to select the optimal dressing mode more correctly. Reduction during dressing in the range of 0.5-0.7 percent with subsequent straightening makes it possible to eliminate the area of yield on the tension diagram and to obtain metal with a minimum yield point, lowered hardness, and a very deep Eriksen hole, which increases the stampability of sheet metal. Six illustrations and seven bibliographic entries.

1/1

1/2 017 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--COLGRING MECHANISM OF CERIUM CONTAINING GLASSES -U-

AUTHOR--(03)--BOGDANOVA, G.S., DZHURINSKIY, B.F., ANTONOVA, S.L.

COUNTRY OF INFO--USSR

SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(4), 776-80

DATE PUBLISHED-----70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CERIUM GLASS, OPTIC PROPERTY, CERIUM COMPOUND, COMPLEX
COMPCUND, SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRAME--2000/2031

STEP NO--UR/0363/70/006/004/0776/0780

CIRC ACCESSION NO--AP0125619

UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSION NO--AP0125619

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MECHANISM BY WHICH CE IMPARTS COLOR TO GLASSES WAS STUDIED AS WAS THE POSSIBILITY OF USING THIS PIGMENT TO PRODUCE YELLOW ORANGE LIGHT FILTERS HAVING PREDTD. AND REPRODUCIBLE SPECTRAL PROPERTIES. THE EFFECT OF FOUNDTIME ON SPECTRAL PROPERTIES OF THESE GLASSES AND ON THE CONCN. OF THE QUADRIVALENT CE ION WAS INVESTIGATED. COMPLEX GROUPS CE PRIMEIV O CE PRIMEIII FORM IN CE CONTG. GLASSES. THE SPECTRAL ABSORPTION OF CE CONTG. GLASSES, AS DEPENDENT ON THE CONCN. OF THE CE CE COMPLEX FOLLOWS BEER'S LAW. THE SPECTRAL CURVE OF THE MOLAR ABSORPTIVITY FOR THE CE CE COMPLEX, WITH ITS MAX. PROBABLY LOCATED IN THE UV SPECTRAL REGION, FOLLOWS A SLOPING PATH. FACILITY: GOS. NAUCH.-ISSLED. INST. STEKLA, MOSCOW, USSR.

UNCLASSIFIED

088P

UDC 621.117.422.001.7

KHOTOMLYANSKIY, A. L., NALCHA, G. I., and BOGDANOVA, I. I.

"Study of Irregularities of Mechanical Properties and Liquation of Chemical Elements in Low-Carbon Sheet Steel"

Dnepropetrovsk, Metallurgicheskaya i Gornorudnaya Promyshlennost', No 4, Jul-Aug 70, pp 34-36

Abstract: Results are presented from studies performed on transverse templets taken from hot-rolled strips of 08KP steel. The studies indicated significant heterogeneity of mechanical properties and liquation of chemical elements across the width of the strip, with good reliability of the calculated correlation coefficients. Analysis of the correlation coefficients between strength and content of each of the chemical elements C, Mn, S, P, and Al indicates significant positive dependence between strength and content of carbon, manganese, and aluminum. The dependence between the strength and the content of sulfur and phosphorus was found to be statistically unreliable. The dependence of yield point and relative elongation on the content of the chemical elements was found to be unreliable. A method is presented for calculating contact elastic flattening of rolls in one particular case of distribution of specific pressure over the width of a strip.

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1/2 017 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--EFFECT OF GAS TEMPERATURE ON THE EFFECTIVENESS OF EXCITATION
TRANSFER IN HELIUM -U-
AUTHOR-(02)-BOGDANOVA, I.P., MARUSIN, V.D. **B**
COUNTRY OF INFO--USSR
SOURCE--OPT. SPEKTROSK. 1970, 28(4), 645-9
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--HELIUM, EXCITATION ENERGY, THERMAL EFFECT
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--1996/1740 STEP NO--UR/0051/70/028/004/0645/0649
CIRC ACCESSION NO--AP0118718
UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0118718

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. HEAT A PRESSURE OF 8 TIMES 10 PRIME
NEGATIVE3-4 TIMES 10 PRIME NEGATIVE2 TORR WAS EXCITED BY THE IMPULSE
ELECTRONIC BEAM. VARIATION WAS OBSD. OF FORM OF THE OPTICAL FUNCTIONS
OF EXCITATION OF THE SPECTRAL LINES OF HE FROM THE LEVELS 3 PRIME3 D
(LAMBDA EQUALS 587.6 NM) AND 4 PRIME3 D (LAMBDA EQUALS 447.1 NM)
MEASURED IN THE REAR AND FRONT OF A RECTANGULAR IMPULSE OF ELECTRONIC
CURRENT OF 1 MUSEC DURATION. THIS VARIATION OF THE FORM IS DETD. BY THE
TRANSFER OF THE EXCITATION FROM OTHER LEVELS OF HE UNTO THE STUDIED
LEVELS. THE MEASUREMENTS SHOW DURATION OF THIS ADDNL. EXCITATION OF THE
LEVELS 3 PRIME3 D AND 4 PRIME3 D LARGER BY AN ORDER OF MAGNITUDE THAN
THEIR RADIATION LIFETIME. INVESTIGATION WAS CARRIED OUT OF THE TEMP.
EFFECT OF THE GAS ON THE MAGNITUDE OF THE EFFECTIVENESS OF TRANSFER OF
THE EXCITATION IN THE TEMP. INTERVAL 120-580DEGREESK. AS THE TEMP. OF
THE GAS VARIES 300-530DEGREESK THE MAGNITUDE OF THE EFFECTIVENESS OF THE
TRANSFER WITHIN EXPTL. ERRORS REMAINS UNCHANGED AND AT THE TEMP. OF
120DEGREESK INCREASES 1.4 FOLD.

UNCLASSIFIED

1/2 GC9 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--COMPLEXES OF GERMANIUM, IV, WITH MANDELIC ACID -U-

AUTHOR--(04)--SHAGISULTANOVA, G.A., KURNEVICH, G.I., VISHNEVSKIY, V.B.,
BOGDANOVA, I.V.
COUNTRY OF INFO--USSR

SOURCE--Zh. NEORG. KHIM. 1970, 15(3), 648-51

DATE PUBLISHED--70

SUBJECT AREAS--CHEMISTRY

TOPIC TAGS--GERMANIUM COMPOUND, COMPLEX COMPOUND, CESIUM COMPOUND, COBALT
COMPLEX, PLATINUM COMPLEX, GLYCOLLIC ACID

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED

PROXY REEL/FRACTION--2000/1705

STEP NO--UR/0078/70/015/003/0648/0651

CIRC ACCESSION NO--AP0125326

UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0125326

ABSTRACT/EXTRACT--(U) GP-U- ABSTRACT. $M(GE(BZCO\ SUB2)SUB2.PHCH(OH)CO$
 $SUB2.H\ SUB2\ O)$, WHERE M EQUALS K PRIME POSITIVE, NH SUB4 PRIME POSITIVE,
CS PRIME POSITIVE, $(CO(EN)SUB2CL\ SUB2)PRIME\ POSITIVE$, $(PT(NH$
 $SUB3)SUB4)PRIME2\ POSITIVE$, OR $(CO\ (NH\ SUB3)SUB6)PRIME3\ POSITIVE\ SEPD.$ AS
SOLIDS DURING REACTION OF $GE(IV)$ WITH MANDELIC ISOMOLAR SERIES SHOWED
FORMATION OF COMPLEXES OF DIFFERENT COMPN. STRUCTURES ARE PROPOSED FOR
THE COMPLEXES OF $GE(IV)$ WITH I.

UNCLASSIFIED

Acc. Nr:

BOGDANOVA M. A.
AP0051926

Ref. Code: *UR 0219*

PRIMARY SOURCE: Byulleten' Eksperimental'noy Biologii i
Meditsiny, 1970, Vol 68, Nr 2, pp 35-38

EFFECT OF ADRENALECTOMY AND NARCOSIS ON THE ANAPHYLACTIC
REACTION

M. A. Bogdanova, L. P. Kopylovskaya

Institute of Experimental Medicine, Academy of Medical Sciences of the USSR,
Leningrad

Removal of both adrenal glands in mice enhanced the sensitivity of the animals to the systemic anaphylactic reaction: minimal lethal doses of the immune serum was 80 times as low as in the control. Removal of but one adrenal gland produced no effect. Administration of cortizone restored the sensitivity of adrenalectomized animals to the normal level. In the adrenalectomized animals local reactions were less pronounced than in the control. Cortizone decreased the frequency of positive reactions. Deep ether narcosis during administration of "antimice" serum did not affect the development of general and local reactions of this type.

ii
REEL/FRAME

13820409

pc 2

USSR

UDC 576.851.31.097.22:615.33

PODOSINNIKOVA, L. S., DOMARADSKIY, I. V., LIBINZON, A. YE., LEBEDEVA, S. A.,
and BOGDANOVA, M. I., Rostov-on-Don Antiplague Institute

"Multiple Resistance of El Tor Cholera Vibrios to Antibiotics"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 4, 1973,
pp 9-13

Abstract: Fresh isolates of El Tor vibrios from patients with cholera were tested for resistance to a number of antibiotics, and several strains were found to show multiple resistance. Resistance was found to decrease on in vitro passage and, since it is known that the El Tor vibrios readily take up resistance transfer factors from intestinal bacteria, studies were undertaken to pass the putative resistance factor from the vibrios to Pasteurella pestis strains EV and 556/106, and to cure the vibrios with acriflavine. Exposure of the vibrios to 0.1-5 $\mu\text{g/ml}$ of acriflavine in Katen's broth for 18-20 hrs at 37°C resulted in loss or decrease of resistance. Exconjugate P. pestis cells were found to acquire resistance to tetracycline, levomycetin, and streptomycin from the resistant vibrios; the resistance factor was transferred with a frequency of 2×10^{-4} to 2×10^{-5} . In summary, the results showed that one strain of El Tor vibrios was cured by acriflavine and transferred resistance to

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- 21 -

USSR

PODOSINNIKOVA, L. S., et al., Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 4, 1973, pp 9-13

P. pestis, four other strains transferred resistance to *P. pestis* but exposure to acriflavine only decreased their antibiotic resistance, and one strain, which was resistant to tetracycline, oxytetracycline, penicillin, and ampicillin, did not transfer resistance to *P. pestis* but was cured of resistance to tetracycline and oxytetracycline by acriflavine. The data suggest the extra-chromosomal nature of the resistance factor. The failure of one strain to transfer the plasmid to *P. pestis* may have been due to the latter's inability to accept the plasmid, or the factor could have been defective or integrated into the chromosome.

2/2

USSR

UDC 615.281.8:547.723.2

GRINEV, A. N., ZOTOVA, S. A., MOEDANOVA, N. S., NIKOLAEVA, I. S. and
SEVCHENKO, G. N.. All Union Scientific Research Chemical-Pharmaceutical Insti-

"The Synthesis and Investigation of the Antiviral Properties of Dibenzo-
furan Derivatives"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 7, No 12, Dec 73, pp 19-21

Abstract: Seventeen dibenzofuran derivatives were synthesized from 2-oxy-
6,7,8,9-tetrahydrodibenzofuran or 2-oxy-dibenzofuran, by bromination, substi-
tution of nitro groups for bromine, aminomethylation and formation of alkyl-
amine ester hydrochlorides. Five of the hydrochlorides were found to have
virocidal activity, with one ten times more effective than the others. No
therapeutic effect was established.

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- 58 -

USSR

Powder Metallurgy

UDC 621.762.669.18.95

PALATNIK, L. S., KAGAN, YA. I., SHILOV, I. F., BELYAYEV, YU. I., BOGDANOVA, A. F., KOBYLEV, P. P., KOLESNIK, B. I., and KUDINOV, D. D., Khar'kov Polytechnic Institute imeni V. I. Lenin

"On the Micro- and Macroheterogeneity of the SAS-1 Alloy"

Kiev, Poroshkovaya Metallurgiya, No 4, Apr 73, pp 22-28

Abstract: A study was made of the physical and chemical heterogeneity of the SAS-1 aluminum sintered alloy. The luminescence method of flaw detection using metallography was employed in the investigation of the physical heterogeneity of the alloy. The nature, dimensions and statistical distribution of pores appearing in the alloy in the process of its production and subsequent treatment were determined. The parameters of the luminescence method were corrected for the purpose of obtaining maximum sensitivity during the investigation of alloy microporosity. It was shown that with selected optimal conditions local pores with dimensions $10 \times 15 \times 25 \mu m$ can be reliably detected. The problems of the appearance of chemical heterogeneity of the alloy in micro- and macrovolumes were considered. Assumptions are advanced whose realization will result in a decreased number of macro- and micro-flaws in the SAS-1 alloy.

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UDC 612.66+612.833.81

USSR

OBRAZTSOVA, G. A., DOBROVOL'SKAYA, V. N., FEDOROV, V. K., ~~BOGDANOVA, A. Ya.~~
Institute of Physiology imeni I. P. Pavlov, Academy of Sciences USSR,
Leningrad

"The Relation of Training and Long-Term Memory in the Ontogenesis of Rats"
Moscow, Doklady Akademii Nauk SSSR, Vol 204, No 3, 1972, pp 763-765

Abstract: The ontogenetic method of investigation permits discovery of the functional characteristics of the brain activity from the time of their development when the relations are simpler and more available for analysis than in mature animals. A study was made of the characteristics of the relation of the education rate and the retention of the defensive conditioned reflex of active escape in the postnatal ontogenesis of a rat. The reproduction of the developed habit in the case of "complete" and "incomplete" training as a different mechanism [J. A. Deutsch, et al., Nature, No 213, 742, 1967] and with a known degree of training, changes in reflexes are almost never observed even after a prolonged interruption (6-8 months). Thus, the so-called "incomplete" training was used.

The development of a conditioned reflex of active escape takes place most rapidly in month-old baby rats. The dynamics of changes in the number of
1/2

USSR

ORRAZTSOVA, G. A., et al., Doklady Akademii Nauk SSSR, Vol 204, No 3, 1972,
PP 763-765

conditioned reflexes of active escape from experiment to experiment and from combination to combination determined by the linear regression coefficient demonstrate that the least increment is observed in 12-month old rats. The period of optimal training in rats up to 1 year old does not coincide with the escape reflex, the 1- and 2-1/2-month-old rats were the best, and when checking for retention they were the worst. The basis for poor memory in the defined ontogenesis period is the following: a) more pronounced nature of the induction relations at an early age, b) greater susceptibility of unreinforced associations to interfering effects, c) insufficient myelination of the gray matter of the cerebral cortex.

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- 64 -

USSR

B
UDC 615.212.015.2:615.214.27.015.4:612.822.3+617-
089.5: 615.212+615.214.2-07:616.831-078.97

KUZIN, M. I., OMISOVA, N. A., YEFIMOVA, N. V., and BOGDANOVA, E. A.,
Chair of Faculty Surgery, First Moscow Medical School named I. M.
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- 70 -

USSR

WUZIN, M. I., et al., Moscow, Khirurgiya, No 1, 1970, pp 96-101

Reorganization of the EEG waves in response to rhythmic light stimulation ceased under the influence of dehydrobenzperidol alone or combined with phentanyl. Phentanyl promoted assimilation of high frequencies of light flashes and blocked the effect of dehydrobenzperidol previously administered. This indicates that phentanyl has a central activating influence.

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Acc. Nr: AP0044853

B

Ref. Code: UR0531

PRIMARY SOURCE: Khirurgiya, 1970, Nr 1, pp 75-101

ON THE EFFECT OF PHENTANYL
AND DEHYDROBENZPERIDOL ON THE HUMAN
CENTRAL NERVOUS SYSTEM

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02

DI

REEL/FRAME
19771708

USSR

UDC 621.382.3:621.375.4

SAMOYLENKO, V. I., BOGDANOVA, G. A.

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- 8 -

USSR

UDC: 621.373.52:621.373.42

BOGDANOVA, G. A.

"Analysis of the Operation of a Transistorized Self-Excited Oscillator With a Nonlinear Master Tank Circuit"

V sb. Poluprovodn. pribory v tekhn. elektrosvyazi (Semiconductor Devices in Technical Electrical Communications--collection of works), Moscow, "Svyaz", 1970, pp 93-105 (from RZh-Radiotekhnika, No 1, Jan 71, Abstract No 1D333)

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1/1

USSR

UDC 621.771.23.001.5

TITLYANOV, A. Ye., POLUKHIN, V. P., BOGDANOVA, G. P., and SAVINKINA, A. I.

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Moscow, Plasticheskaya Deformatsiya Metallov i Splavov, "Metallurgiya"
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1/1

- 25 -

UDC 621.771.23.001.5

USSR

TTTTLYANOV, A. Ye., POLUKHIN, V. P., BOGDANOVA, G. P., and SAVINKINA, A. I.

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Publishing House, No. 64, 1970, pp 97-103

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1/2 017 UNCLASSIFIED PROCESSING DATE--30OCT70
TITLE--CULGRING MECHANISM OF CERIUM CONTAINING GLASSES -U-
AUTHOR--(03)--BOGDANOVA, G.S., DZHURINSKIY, B.F., ANTONOVA, S.L.
COUNTRY OF INFO--USSR **B**
SOURCE--IZV. AKAD. NAUK SSSR, NEORG. MATER. 1970, 6(4), 776-80
DATE PUBLISHED--70

SUBJECT AREAS--MATERIALS

TOPIC TAGS--CERIUM GLASS, OPTIC PROPERTY, CERIUM COMPOUND, COMPLEX
COMPOUND, SPECTRUM

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--2000/2031

STEP NO--UR/0363/70/006/004/0776/0780

CIRC ACCESSION NO--AP0125619

UNCLASSIFIED

2/2 017

UNCLASSIFIED

PROCESSING DATE--30OCT70

CIRC ACCESSIGN NG--AP0125619

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE MECHANISM BY WHICH CE IMPARTS COLOR TO GLASSES WAS STUDIED AS WAS THE POSSIBILITY OF USING THIS PIGMENT TO PRODUCE YELLOW ORANGE LIGHT FILTERS HAVING PREDTD. AND REPRODUCIBLE SPECTRAL PROPERTIES. THE EFFECT OF FOUNDTIME ON SPECTRAL PROPERTIES OF THESE GLASSES AND ON THE CONC. OF THE QUADRIVALENT CE ION WAS INVESTIGATED. COMPLEX GROUPS CE PRIMEIV O CE PRIMEIII FORM IN CE CONTG. GLASSES. THE SPECTRAL ABSORPTION OF CE CONTG. GLASSES, AS DEPENDENT ON THE CONC. OF THE CE CE COMPLEX FOLLOWS BEER'S LAW. THE SPECTRAL CURVE OF THE MOLAR ABSORPTIVITY FOR THE CE CE COMPLEX, WITH ITS MAX. PROBABLY LOCATED IN THE UV SPECTRAL REGION, FOLLOWS A SLOPING PATH. FACILITY: GOS. NAUCH.-ISSLED. INST. STEKLA, MOSCOW, USSR.

UNCLASSIFIED

USSR

UDC 621.317.422.001.5

KHOTOMLYANSKIY, A. L., NALCHA, G. I., and BOGDANOVA, I. I.

"Study of Irregularities of Mechanical Properties and Liquation of Chemical Elements in Low-Carbon Sheet Steel"

Dnepropetrovsk, Metallurgicheskaya i Gornorudnaya Promyshlennost', No 4, Jul-Aug 70, pp 34-36

Abstract: Results are presented from studies performed on transverse templets taken from hot-rolled strips of 08KP steel. The studies indicated significant heterogeneity of mechanical properties and liquation of chemical elements across the width of the strip, with good reliability of the calculated correlation coefficients. Analysis of the correlation coefficients between strength and content of each of the chemical elements C, Mn, S, P, and Al indicates significant positive dependence between strength and content of carbon, manganese, and aluminum. The dependence between the strength and the content of sulfur and phosphorus was found to be statistically unreliable. The dependence of yield point and relative elongation on the content of the chemical elements was found to be unreliable. A method is presented for calculating contact elastic flattening of rolls in one particular case of distribution of specific pressure over the width of a strip.

1/1

1/2 017 UNCLASSIFIED PROCESSING DATE--23OCT70
TITLE--EFFECT OF GAS TEMPERATURE ON THE EFFECTIVENESS OF EXCITATION
TRANSFER IN HELIUM -U-
AUTHOR--(02)-BOGDANOVA, I.P., MARUSIN, V.D. **B**
COUNTRY OF INFO--USSR
SOURCE--OPT. SPEKTROSK. 1970, 28(4), 645-9
DATE PUBLISHED----- 70

SUBJECT AREAS--PHYSICS
TOPIC TAGS--HELIUM, EXCITATION ENERGY, THERMAL EFFECT

CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1996/1740 STEP NO--UR/0051/70/028/004/0645/0649
CIRC ACCESSION NO--AP0118718
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--23OCT70

2/2 017

CIRC ACCESSION NO--AP0118718
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. HEAT A PRESSURE OF 8 TIMES 10 PRIME
NEGATIVE 3-4 TIMES 10 PRIME NEGATIVE 2 TORR WAS EXCITED BY THE IMPULSE
ELECTRONIC BEAM. VARIATION WAS OBSD. OF FORM OF THE OPTICAL FUNCTIONS
OF EXCITATION OF THE SPECTRAL LINES OF HE FROM THE LEVELS 3 PRIME 3 D
(LAMBDA EQUALS 587.6 NM) AND 4 PRIME 3 D (LAMBDA EQUALS 447.1 NM)
MEASURED IN THE REAR AND FRONT OF A RECTANGULAR IMPULSE OF ELECTRONIC
CURRENT OF 1 MUSEC DURATION. THIS VARIATION OF HE ONTO THE STUDIED
TRANSFER OF THE EXCITATION FROM OTHER LEVELS OF HE ADDNL. EXCITATION OF THE
LEVELS. THE MEASUREMENTS SHOW DURATION OF THIS ADDNL. EXCITATION OF THE
LEVELS 3 PRIME 3 D AND 4 PRIME 3 D LARGER BY AN ORDER OF MAGNITUDE THAN
THEIR RADIATION LIFETIME. INVESTIGATION WAS CARRIED OUT OF THE TEMP.
EFFECT OF THE GAS ON THE MAGNITUDE OF THE EFFECTIVENESS OF TRANSFER OF
THE EXCITATION IN THE TEMP. INTERVAL 120-580 DEGREE SK. AS THE TEMP. OF
THE GAS VARIES 300-580 DEGREE SK THE MAGNITUDE OF THE EFFECTIVENESS OF THE
TRANSFER WITHIN EXPTL. ERRORS REMAINS UNCHANGED AND AT THE TEMP. OF
120 DEGREE SK INCREASES 1.4 FOLD.

UNCLASSIFIED

1/2 DC9 UNCLASSIFIED PROCESSING DATE--20NOV70
TITLE--COMPLEXES OF GERMANIUM, IV, WITH MANDELIC ACID -U-
AUTHOR--(04)--SHAGISULTANOVA, G.A., KURNEVICH, G.I., VISHNEVSKIY, V.B.,
BOGDANOVA, I.V.
COUNTRY OF INFO--USSR
SOURCE--Zh. NEORG. KHIM. 1970, 15(3), 648-51
DATE PUBLISHED--70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--GERMANIUM COMPOUND, COMPLEX COMPOUND, CESIUM COMPOUND, COBALT
COMPLEX, PLATINUM COMPLEX, GLYCOLLIC ACID
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--2000/1705
STEP NO--UR/0078/70/015/003/0648/0651
CIRC ACCESSION NO--AP0125326
UNCLASSIFIED

2/2 009

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC ACCESSION NO--AP0125326

ABSTRACT/EXTRACT--(U) GP-U- ABSTRACT. $MIGe(BZCO\ SUB2)SUB2.PHCH(OH)CO$
 $SUB2.H\ SUB2\ O$, WHERE M EQUALS K PRIME POSITIVE, NH SUB4 PRIME POSITIVE,
CS PRIME POSITIVE, $(CG(EN)SUB2CL\ SUB2)PRIME\ POSITIVE$, $(PT(NH$
 $SUB3)SUB4)PRIME2\ POSITIVE$, OR $(CO\ (NH\ SUB3)SUB6)PRIME3\ POSITIVE\ SEPD$. AS
SOLIDS DURING REACTION OF $Ge(IV)$ WITH MANDELIC ISOMOLAR SERIES SHOWED
FORMATION OF COMPLEXES OF DIFFERENT COMPN. STRUCTURES ARE PROPOSED FOR
THE COMPLEXES OF $Ge(IV)$ WITH I.

UNCLASSIFIED

Acc. Nr:

BOGDANOVA M. A.
AP0051926

Ref. Code: *UR-0219*

PRIMARY SOURCE: Byulleten' Eksperimental'noy Biologii i
Meditsiny, 1970, Vol *69*, Nr *2*, pp *35-38*

EFFECT OF ADRENALECTOMY AND NARCOSIS ON THE ANAPHYLACTIC
REACTION

M. A. Bogdanova, L. P. Kopylovskaya

Institute of Experimental Medicine, Academy of Medical Sciences of the USSR,
Leningrad

Removal of both adrenal glands in mice enhanced the sensitivity of the animals to the systemic anaphylactic reaction: minimal lethal doses of the immune serum was 80 times as low as in the control. Removal of but one adrenal gland produced no effect. Administration of cortizone restored the sensitivity of adrenalectomized animals to the normal level. In the adrenalectomized animals local reactions were less pronounced than in the control. Cortizone decreased the frequency of positive reactions. Deep ether narcosis during administration of "antimice" serum did not affect the development of general and local reactions of this type.

REEL/FRAME

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19820409

pc 2

UDC 576.851.31.097.22:615.33

USSR

PODOSINNIKOVA, L. S., DOMARADSKIY, I. V., LIBINZON, A. YE., LEBEDEVA, S. A.,
and BOGDANOVA, M. I., Rostov-on-Don Anti plague Institute

"Multiple Resistance of El Tor Cholera Vibrios to Antibiotics"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 4, 1973,
pp 9-13

Abstract: Fresh isolates of El Tor vibrios from patients with cholera were tested for resistance to a number of antibiotics, and several strains were found to show multiple resistance. Resistance was found to decrease on in vitro passage and, since it is known that the El Tor vibrios readily take up resistance transfer factors from intestinal bacteria, studies were undertaken to pass the putative resistance factor from the vibrios to Pasteurella pestis strains EV and 556/106, and to cure the vibrios with acriflavine. Exposure of the vibrios to 0.1-5 $\mu\text{g/ml}$ of acriflavine in Katen's broth for 18-20 hrs at 37°C resulted in loss or decrease of resistance. Exconjugate P. pestis cells were found to acquire resistance to tetracycline, levomycetin, and streptomycin from the resistant vibrios; the resistance factor was transferred with a frequency of 2×10^{-4} to 2×10^{-5} . In summary, the results showed that one strain of El Tor vibrios was cured by acriflavine and transferred resistance to

1/2

- 21 -

USSR

PODOSINNIKOVA, L. S., et al., Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 4, 1973, pp 9-13

P. pestis, four other strains transferred resistance to P. pestis but exposure to acriflavine only decreased their antibiotic resistance, and one strain, which was resistant to tetracycline, oxytetracycline, penicillin, and ampicillin, did not transfer resistance to P. pestis but was cured of resistance to tetracycline and oxytetracycline by acriflavine. The data suggest the extra-chromosomal nature of the resistance factor. The failure of one strain to transfer the plasmid to P. pestis may have been due to the latter's inability to accept the plasmid, or the factor could have been defective or integrated into the chromosome.

2/2

UDC 615.281.8:547,728.2

USSR

GRINEV, A. N., ZOTOVA, S. A., BOGDANOVA, N. S., NIKOLAYEVA, I. S. and
PERSHIN, G. N., All-Union Scientific Research Chemical-Pharmaceutical Insti-
tute imeni S. Orkzhonikidze, Moscow

"The Synthesis and Investigation of the Antiviral Properties of Dibenzo-
furan Derivatives"

Moscow, Khimiko-Farmatsevticheskiy Zhurnal, Vol 7, No 12, Dec 73, pp 19-21

Abstract: Seventeen dibenzofuran derivatives were synthesized from 2-oxy-
6,7,8,9-tetrahydrodibenzofuran or 2-oxy-dibenzofuran, by bromination, substi-
tution of nitro groups for bromine, aminomethylation and formation of alkyl-
amine ester hydrochlorides. Five of the hydrochlorides were found to have
virocidal activity, with one ten times more effective than the others. No
therapeutic effect was established.

1/1

- 58 -

Therapy

USSR

UDC 615.281.8.035.4:616.938.75-053.4-036.8

AKSENOV, V. A., SELIDOVSKIN, D. A., GLADKIKH, G. N., KUBLIKOV, V. S., KUZNETSOVA, O. V., MOLODTSOVA, L. D., BERESENEVA, R. A., AKSENOV, L. A., BOGDANOVA, N. S., and PERSHIN, G. N., All Union Chemico-Pharmaceutical Institute imeni S. Ordzhonikidze, Ministry of Health USSR

"Study of the Prophylactic Value of the New Soviet Antiviral Preparation Oxolin in Preschool Children during the 1969 Influenza Epidemic"

Moscow, Pediatriya, No 5, 1970, pp 18-22'

Abstract: The viricidal agent oxolin (tetraoxotetrahydronaphthalene (dihydrate)) is effective in the treatment of adenovirus kerato-conjunctivitis, herpetic keratitis, dermatitides of virus etiology, and some acute respiratory diseases. In a double-blind trial, oxolin was administered to 4,170 children one to seven years of age in an unidentified Soviet city during the 1969 influenza epidemic. (It was applied to the nasal mucosa in the form of a 0.25% ointment on a vaseline base twice daily for 40-49 days). Oxolin reduced the incidence of influenza 1.7 times (43%) compared with control children. Severe forms of the disease and complications were 1.1-1.4 times more frequent in the latter than in those who received the preparation, and the course of the disease was 1.2 days longer on the average. The use of oxolin produced side effects in only 0.6% of the cases.

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2

UDC 615.281.5.035.4:616.988.75-036.8

USSR

AKSENOV, V. A., SELIDOVKIN, D. A., GLADKIKH, G. N., GRAKHOVA, A. G., BOGDANOVA, N. S., and PERSHIN, G. N., Ministry of Health USSR, and All Union Scientific Research Chemicopharmaceutical Institute imeni S. Ordzhonikidze, Moscow

"Evaluation of the Prophylactic Effectiveness of the New Soviet Antiviral Agent Oxoline During the 1969 Influenza Epidemic"

Moscow, Farmakologiya i Toksikologiya, Vol 33, No 6, Nov/Dec 70, pp 726-733

Abstract: Oxoline, a polyox compound of the naphthalene series, is a virucidal drug with selective activity against influenza virus and a local action. It is effective in the treatment of virus infections of the eyes and skin, and relieves the symptoms of influenza in patients on application in the nasal and pharyngeal cavities. Its effectiveness as an influenza preventive was studied during the 1969 epidemic caused by the A2 virus. Tests were carried out on 9,600 children 1-7 years old in two cities. Oxoline was applied twice a day for 25 days on the mucosa of the nose in the form of an 0.25-0.5% vaseline ointment, using 0.3-0.5 g ointment per child per day. The coefficient of effectiveness in preventing influenza was 1.7, corresponding to a reduction of the incidence of influenza by 43% over the frequency of side effects was 0.6 and 0.9% for the 0.25 and

USSR

AKSENOV, V. A., et al, Farmakologiya i Toksikologiya, Vol 33, No 6, Nov/Dec 70, pp 726-733

and 0.5% ointment, respectively. The 0.25% ointment was as effective as the 0.5% ointment. The effectiveness coefficient was the same for children 1-3 years and 4-7 years old, a fact which indicated that oxoline produces a barrier effect, preventing entrance of the infection into the organism through the nasal mucosa, and is not resorbed into the blood. Prophylactic treatment with oxoline alleviated the clinical course of influenza when infection did occur and shortened the duration of the disease.

2/2

1/2 023 UNCLASSIFIED
TITLE--3,5,3 PRIME,5 PRIME,TETRABROMO,2,4,2 PRIME,4
PRIME,TETRAHYDROXYBIPHENYL COMPOSITIONS FOR TREATING VIRAL EYE DISEASES
AUTHOR--(04)-NIKOLAEVA, I.S., KRAFT, N.YA., PERSHIN, G.N., BOGDANOVA, N.S.
COUNTRY OF INFO--USSR
SOURCE--FR. DEMANDE 2,007,474
DATE PUBLISHED--09JAN70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--DRUG, EYE DISEASE, PATENT, VIRUS DISEASE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3004/1079
STEP NO--FR/0000/70/000/000/0000/0000
CIRC ACCESSION NO--AA0131626
UNCLASSIFIED

B

2/2 023

UNCLASSIFIED

PROCESSING DATE--20NOV70

CIRC-ACCESSION NO--AA0131626

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. THE TITLE COMPD. (TEBROPHEN) AS SUCH OR IN 0.1, 0.25, AND 1PERCENT OINTMENTS IN VASELINE (VASELINE 80, VASELINE CIL 20PERCENT) IS EFFECTIVE IN VIRAL EYE INFECTIONS, INCLUDING VARIOUS FORMS OF HERPETIFORM KERATITIS. HUMAN TESTS SHOWED RELIEF IN 3-5 DAYS AND CURE IN 10-14 DAYS. TEBROPHEN IS ALSO EFFECTIVE IN OTHER VIRAL INFECTIONS. FACILITY: GRDZHONIKIDZE, S., ALL UNION SCIENTIFIC RESEARCH CHEMICAL PHARMACEUTICAL INSTITUTE.

UNCLASSIFIED

USSR

UDC 535.379:576.851.5

DOSKOCH, Ya. Ye., PARKHOMENKO, I. M., BOGDANOVA, N. V., MAZOKHINA, N. N.,
and TARUSOV, B. N., Moscow State University and All-Union Institute of the
Canning and Vegetable-Drying Industries

"Spontaneous and Induced Chemoluminescence of Spores From Thermophilic
Microorganisms in Relation to Their Thermostability"

Moscow, Mikrobiologiya, No 5, 1971, pp 849-857

Abstract: Study of spores from the thermophilic strain *Bacillus aerothermo-*
philus showed that they do not luminesce spontaneously whether heated or not.
However, passage of an electrical current through unheated spore suspensions
induced luminescence at a constant level. The intensity was much lower than
the luminescence emitted by suspensions heated to 120 to 130°C and the shape
of the kinetic curve was much different. The intensity of luminescence was
a function of the duration of heating, the maximum occurring after all the
spores were killed due to destruction of the spore coat. High temperatures
also affected the electrical conductance of the suspensions. In suspensions
heated to 120°C the maximum current intensity occurred after 90 minutes,
whereas in suspensions heated to 130°C it occurred after 3 minutes, the time
when all the spores were killed, i.e., the current intensity varied with
the number of dead microorganisms.

1/1

1/2 015
UNCLASSIFIED
TITLE--MECHANISM OF CARBON DIOXIDE FORMATION IN THE OXIDATIVE
DEHYDROGENATION OF ETHYLBENZENE TO STYRENE -U-
AUTHOR--(04)--ISAGULYANTS, G.V., BOGDANOVA, O.K., BELOMESTNYKH, I.P.,
ROZHDESTVENSKAYA, N.N.
COUNTRY OF INFO--USSR
SOURCE--NEFTEKHIMIYA 1970, 10(2), 174-7
DATE PUBLISHED-----70

SUBJECT AREAS--CHEMISTRY, NUCLEAR SCIENCE AND TECHNOLOGY
TOPIC TAGS--CARBON DIOXIDE, DEHYDROGENATION, ETHYLEBENZENE, STYRENE,
CARBON ISOTOPE, OXIDATION

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--3006/0959

STEP NO--UR/0204/70/010/002/0174/0177

PROCESSING DATE--04DEC70
THE TITLE MECHANISM WAS STUDIED BY
THE STYRENE (1), PRIME14 C. I WAS THE
CATALYST MGD, (NH SUB4) SUB2, MOD SUB4 HAD
DEHYDROGENATION OF ETPH TO I.
IN. ZELINSKOGO, MOSCOW, USSR.

UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--04DEC70

CIRC ACCESSION NO--AP0134677

ABSTRACT/EXTRACT--(U) GP-G- ABSTRACT. THE TITLE MECHANISM WAS STUDIED BY THE KINETIC ISOTOPE METHOD, USING STYRENE (I), PRIME14 C. I WAS THE ONLY PRECURSOR OF CO SUB2. THE CATALYST MGO, (NH SUB4) SUB2, MOD SUB4 HAD HIGH SELECTIVITY FOR THYOXIDATIVE DEHYDROGENATION OF ETPH TO I. FACILITY: INST. ORG. KHIM. IM. ZELINSKOGO, MOSCOW, USSR.

UNCLASSIFIED

1/2 013
TITLE--INDIRECT POLAROGRAPHIC DETERMINATION OF PHENOTHIAZINE -U-
AUTHOR-(03)-TURYAN, YA.I., MEKRYUKOVA, T.V., BOGDANOVA, O.V. *B*
COUNTRY OF INFO--USSR
SOURCE--ZH. ANAL. KHIM. 1970, 25(2), 384-6
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--POLAROGRAPHIC ANALYSIS, ORGANIC AZINE COMPOUND, BENZENE
DERIVATIVE, NITRATION, ORGANIC SULFUR COMPOUND, DROPPING MERCURY
ELECTRODE
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1993/0686
CIRC ACCESSION NO--AP0113557
UNCLASSIFIED

PROCESSING DATE--16OCT70

STEP NO--UR/0075/70/025/002/0384/0386

2/2 013

UNCLASSIFIED

PROCESSING DATE--16OCT70

CIRC ACCESSION NO--AP0113557

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AS INDIRECT POLAROGRAPHIC METHOD FOR PHENOTHIAZINE ON A DROPPING HG ELECTRODE WAS DEVELOPED. THE METHOD IS BASED ON NITRATION AND OBTAINING THE CATHODIC POLAROGRAPHIC WAVE. THE NITROSOAMINE FORMED GIVES A REDN. WAVE ON A DROPPING HG ELECTRODE WITH E SUBONE HALF EQUALS MINUS 0.93 IN A SUPPORTING ELECTROLYTE OF NA SUB2 SO SUB4 (SATD.) PLUS 0.04M NAOH PLUS 14PERCENT H SUB2 O PLUS 18PERCENT MEOH PLUS 68PERCENT ETOH. TO 1 G OF THE SAMPLE IN HCONME SUB2 OR MEOH, ADD 9 ML MEOH, 2 ML 6M NANO SUB2, AND 1 ML 2N H SUB2 SO. AFTER 10 MIN ADD 4 ML 2.5N NAOH AND OIL. TO 50 ML WITH ETOH. RECORD THE POLAROGRAM IN THE POTENTIAL RANGE OF MINUS 0.5 TO MINUS 1.4V. THE SENSITIVITY OF THE DETN. IS 5 TIMES 10 PRIME NEGATIVE3 PERCENT. THE ERROR IS PLUS OR MINUS 5PERCENT. FACILITY: SCI. RES. INST. MONUMERS. SYN. RUBBERS, YAROSLAYL, USSR.

UNCLASSIFIED

UNCLASSIFIED
LE--INDIVIDUAL HYDROCARBON COMPOSITIONS OF THE BENZENE, PROC
FRACTION OF LIGHT PYROLYSIS TAR -U-
AUTHOR--(03)--BOGDANDVA, T.A., KHALILOVA, SH.A., KAMBAROV, YU.G.
COUNTRY OF INFO--USSR
SOURCE--NEFTEPERERAB. NEFTEKHIM. (MOSCOW) 1970, (2), 28-9
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TAGS--HYDROCARBON, BENZENE, TOLUENE, XYLENE, KEROSENE, GAS OIL,
HEUM FRACTION, STYRENE, PYROLYSIS
STEP NO--UR/0318/70/000/002/0028/0029

1/2 017
UNCLASSIFIED
TITLE--INDIVIDUAL HYDROCARBON COMPOSITIONS OF THE BENZENE, TOLUENE, XYLENE
FRACTION OF LIGHT PYROLYSIS TAR -U-
AUTHOR-(03)-BOGDANOVA, T.A., KHALILOVA, SH.A., KAMBAROV, YU.G.
COUNTRY OF INFO--USSR
SOURCE--NEFTEPERERAB. NEFTEKHIM. (MOSCOW) 1970, (2), 28-9
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--HYDROCARBON, BENZENE, TOLUENE, XYLENE, KEROSENE, GAS OIL,
PETROLEUM FRACTION, STYRENE, PYROLYSIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAME--1997/0790
STEP NO--UR/0318/70/000/002/0028/0029
CIRC ACCESSION NO--AP0119697
UNCLASSIFIED

UNCLASSIFIED

PROCESSING DATE--30OCT70

2/2 017
CIRC ACCESSION NO--AP0119697
ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. A MIXT. OF CRACKING KEROSENE AND
STRAIGHT RUN GAS OIL WAS SUBJECTED TO PYROLYSIS AT 740DEGREES AND 3 SEC
CONTACT TIME WITH 11PERCENT STEAM, GIVING 20PERCENT LIGHT TAR. THE
LATTER YIELDED 38.08PERCENT FRACTION B. SMALLER THAN OR EQUAL TO
145DEGREES AND CONTG. C SUB6 H SUB6 37.12, PHME 32.05, XYLENES 11.26,
PHET 3.39, STYRENE 1.31, AND 14.87 WT. PERCENT NONAROMATIC HYDROCARBONS.
IN THE FRACTION, 68 COMPONENTS WERE DETD., 48 OF WHICH WERE IDENTIFIED.

UNCLASSIFIED

UDC 576.851.49.094.85:615.371:851.497.012.6
USSR

BOGDANOVA, V. V., STANISLAVSKIY, YE. S., MATER, G. A., and NEGINA, YU. P.,
Gor'kiy Institute of Epidemiology and Microbiology and Moscow Institute of
Vaccines and Sera imeni Mechnikov

"Protective Properties of Cell Fractions and Mixtures of Isolated from the
Vi-Positive Strain of Typhoid Bacillus"

Moscow, Zhurnal Mikrobiologii, Epidemiologii i Immunobiologii, No 12, 1971,
pp 87-89

Abstract: Various cell fractions isolated from S. typhi Ty₂ 4446 (capsular
substance, cell walls, culture fluid, capsular substance + cell walls, culture
fluid + cell walls) were tested as vaccines in mice. Two weeks after the
mice were vaccinated, they were infected with a virulent strain of S.
typhi Ty₂ 4446 (LD₅₀ 13 million cells). The mixture of cell walls and
culture fluid proved to be the most efficacious in protecting mice infected
with 5 LD₅₀ of typhoid bacillus. Both fractions possess little toxicity
for mice and contain protective Vi and O antigens (whose macromolecular
organization is close to the crude antigens in the original microbial cell).
Unlike corpuscular vaccine, they do not contain intracellular components
that may have immunodepressive activity or stimulate the synthesis of auto-
antibodies. 1/1

1/2 014
TITLE--IMMUNOELECTROPHORETIC ANALYSIS OF THE S. TYPHI TY SUB2 ANTIGENIC
COMPLEX -U-
AUTHOR--(02)--BOGDANOVA, V.V., MATER, G.A.
COUNTRY OF INFO--USSR
SOURCE--ZHURNAL MIKROBIOLOGII, EPIDEMIOLOGII I IMMUNOBIOLOGII, 1970, NR 4,
PP 25-28
DATE PUBLISHED--70
SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--TYPHOID FEVER, O ANTIGEN, ELECTROPHORESIS
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1990/1472
CIRC ACCESSION NO--AP0109532
STEP NO--UR/0016/70/000/004/0025/0028
UNCLASSIFIED

2/2 014

UNCLASSIFIED

PROCESSING DATE--13NOV70

CIRC ACCESSION NO--AP0109532

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. BOIVIN ANTIGEN OBTAINED FROM TYPHOID STRAIN TY SUB2 4446 WAS SUBJECTED TO IMMUNOELECTROPHORETIC ANALYSIS; INDIVIDUAL COMPONENTS OF THE COMPLEX AND THEIR INTERACTION WERE CHARACTERIZED. AS DEMONSTRATED, VI ANTIGEN WAS BOUND BY THERMOLABILE BOND WITH THE O ANTIGENIC COMPLEX, APPARENTLY WITH ITS PROTEING COMPONENT; AS A RESULT, AN ANODE O FRACTION WAS DETECTED IN IMMUNOELECTROPHORESIS. THE THERMOLABILE BOND WAS DISRUPTED ON HEATING, AND THE O ANTIGENIC COMPLEX ACQUIRED A MOBILITY IN THE ELECTRIC FIELD CHARACTERISTIC OF TYPHOID O ANTIGEN IN THE DIRECTION OF THE CATHODE.

UNCLASSIFIED

USSR

UDC 666.321:622.765

KUZOVLEV, A. K., Candidate of Technical Sciences, IGNATENKOVA, N. I., Engineer, MAL'TSEVA, I. I., Engineer, and BOGDANOVA, Ye. D., Engineer, Central Asian Scientific Research Institute of Geology and Mineral Raw Material

"Experience in Centrifugal Floating Classification of Angrensk Kaolins in Hydraulic Turbocyclone"

Moscow, Steklo i Keramika, No 2, 1973, pp 25-26

Abstract: Experiments of flotation of kaolins were conducted on TTs-1D (TVN-75) turbocyclone and GTN-200 laboratory hydraulic turbocyclone by the Khimgeolnerud expedition at the Angrensk Research Station, in order to investigate a possible increase of the effectiveness of flotation of secondary kaolins. The centrifugal floating classification on the GTN-200 turbocyclone revealed that a high-quality kaolin concentrate with up to 32-34 % alumina content can be produced. This kaolin does not get worse with increasing density of the processed pulp and it is practically not inferior that the kaolin concentrated on NOGSh-325 scroll centrifuge. Three tables, one bibliographic reference.

1/1

USSR

UDC 595.771/.772-19(470.46)

POTAPOV, A. A., VLADIMIROV, V. V., MEL'NIK, T. D., and BOGLANOVA, Ye. N.,
Institute of Medical Parasitology and Tropical Medicine named Ye. I. Mart-
sinovskiy, Ministry of Health USSR, Moscow

"The Species Composition and Diurnal Activity of Mosquitoes and Gadflies in
the Lower Volga Delta"

Moscow, Meditsinskaya Parazitologiya i Parazitarnyye Bolezni, Vol 42, No 1, Jan/
Feb 73, pp 5-11

Abstract: Observations carried out in the lower Volga delta (Obzhorsk district
of the Astrakhan' Reservation) through Jun/Aug in 1966-67 indicated that 6
mosquito species, 12 gadfly species, and 2 gnat species breed there. The most
numerous species of mosquitoes were *Aedes vexans* and *Anopheles hircanus* and the
most numerous species of gadflies *Hybomitra acuminatus* and *H. peculiaris* and also
(in 1966, a year of high floods) *Chrysops relictus* and *Chr. flavipes*. The
maximum activity of mosquitoes and gnats, as far as attacks on humans were con-
cerned, was in the morning and evening hours, and the maximum activity of gad-
flies in the daytime. Among mosquitoes only *Ae. vexans* and *Ae. caspius* attacked
in the daytime in the shade - *An. hircanus*, *An. maculipennis*, and *Mansonia*
richiardii mosquitoes became active in the cool air after dark. Of gadflies
1/2

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USSR

POTAPOV, A. A., et al., Meditsinskaya Parazitologiya i Parazitarnyye Bolezni,
Vol 42, No 1, Jan/Feb 73, pp 5-11

with mass occurrence the most thermophilic were *Chr. relictus* and *H. peculiaris*,
which attacked at the hottest time in the afternoon. In the evening, when
inversion air currents developed, *A. vexans* mosquitoes were displaced upwards
to the tree tops.

2/2

1/2 015
TITLE--FREE SUBUNITS OF RNA POLYMERASE IN NORMAL AND PHAGE INFECTED CELLS
OF E. COLI -U-
AUTHOR-(04)-BOGDANOVA, YE.S., ZOGRAF, YU.N., BASS, I.A., SHEMYAKIN, M.F.
COUNTRY OF INFO--USSR
SOURCE--MOLEKULYARNAYA BIOLOGIYA, 1970, VOL 4, NR 3, PP 435-444
DATE PUBLISHED-----70

SUBJECT AREAS--BIOLOGICAL AND MEDICAL SCIENCES
TOPIC TAGS--ESCHERICHIA COLI, PHAGE, RNA, ENZYME

CONTROL MARKING--NO RESTRICTIONS

DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRA--1999/0386

STEP NO--UR/0463/70/004/003/0435/0444

ACCESSION NO--AP0122567

UNCLASSIFIED

2/2 015

UNCLASSIFIED

PROCESSING DATE--23OCT70

CIRC ACCESSION NO--AP0122567

ABSTRACT/EXTRACT--(U) GP-0-

ABSTRACT. THE ADDITION OF SUPERNATANTS

OBTAINED AFTER ULTRACENTRIFUGATION (5.5 HOURS; 300,000 G) OF THE NONINFECTED CELLS LYSATES OF E. COLI (STRAINS B, 3.050, TS 19) RESULTS IN A SHARP INCREASE OF ACTIVITY OF THE HEATED E. COLI RNA POLYMERASE. THIS ACTIVATION IS CONNECTED WITH SMALL PARTICLES (SIMILAR TO 3-5S) AND IS ELIMINATED BY ANTIBODIES AGAINST PURIFIED E. COLI RNA POLYMERASE. THE INCREASE OF ACTIVITY OF THE HEATED ENZYME IS, THEREFORE, DUE TO THE PRESENCE OF THE SMALL COMPONENT OF POLYMERASE IN THE ULTRACENTRIFUGATES THAT MAKES POSSIBLE THE RECONSTRUCTION OF THE ENZYME FROM THE SMALL AND THE LARGE SUBUNITS. THE ULTRACENTRIFUGATE OF E. COLI B CELLS INFECTED WITH THE PHAGE T2 OR T4 OR WITH AN AMBER MUTANT N122 OF PHAGE T4, AS A RULE, DOES NOT ACTIVATE THE HEATED ENZYME. MOREOVER, IT SIGNIFICALLY INHIBITS THE RNA SYNTHESIS CATALYZED BY THE MIXTURE OF THE HEATED ENZYME AND THE ULTRACENTRIFUGATE FROM NONINFECTED CELLS, BUT DOES NOT AFFECT THE ACTIVITY OF THE NATIVE RNA POLYMERASE. INHIBITION IS NOT OBSERVED IN THE CASE WHEN THE RECONSTRUCTED ENZYME HAS ALREADY BEGUN TO SYNTHESIZE RNA BEFORE THE ADDITION OF THE ULTRACENTRIFUGATE FROM INFECTED BACTERIA. THE DATA OBTAINED MAKE IT POSSIBLE TO CONCLUDE THAT THE LYSATES OF THE INFECTED CELLS CONTAIN INHIBITOR WHICH SPECIFICALLY PREVENTS RECONSTRUCTION OF ACTIVE RNA POLYMERASE FROM ITS LARGE AND SMALL SUBUNITS. THE SUM OF RESULTS INDICATES THAT A MECHANISM OF REGULATION OF RNA POLYMERASE ACTIVITY MAY EXIST IN THE CELL, THAT ACTS ON THE LEVEL OF ASSOCIATION OF THE LARGE AND SMALL SUBUNITS OF THIS ENZYME.

FACILITY: INSTITUTE OF ATOMIC ENERGY, USSR, MOSCOW.

UNCLASSIFIED

UDC: 62-278.001.2

USSR

ANDREYEVA, L. Ye., Candidate of Technical Sciences, and BOGDANOVA, Yu. A.

"Designing Corrugated Diaphragms in Accordance With a Specified Characteristic"

Moscow, Pribory i sistemy upravleniya, No 6, 1972, pp 37-39

Abstract: In an earlier article published in this same journal (Metodika proyektirovaniya gofirovannykh membran --- A Method of Designing Corrugated Diaphragms --- No 9, 1969) the first of the authors named above offered a method for designing such diaphragms in accordance with a characteristic specified by the stiffness and nonlinearity of the diaphragm. In the present article, the authors consider the more complex case in which the elasticity characteristic in the form of a function of the pressure, and its tolerated field, are both specified. The problem the article sets out to solve is to select a diaphragm geometry such that the demands of characteristic, tolerated voltages, and the dimensions of the sensitive element are satisfied. The method is primarily graphic, and the curves used in carrying it out are reproduced. The characteristic of experimental specimens prepared by this method is in close agreement with the specified character-

UDC 621.374.4

USSR

BOGDANOVICH, B.M. [Moscow Radio Engineering Institute]

"Calculation Of Aperiodic Multipliers Of The Frequency Of Harmonic Oscillations In A Dynamic Regime [Presented By Academician Of The AS, BSSR, Ye.G.Kononov]"

Doklady Akademii Nauk BSSR, Vol XVI, No 7, July 1972, pp 610-613

Abstract: The spectrum is studied of the output oscillations of a multiplier, with a number of factors impairing the "purity" of the multiplier taken into account. The relations between the quality indices of the multiplier are found. The possibility is considered of a synthesis of aperiodic multipliers with arbitrary R_L , R_{load} and a high degree of "purity." The effect is studied of the parasitic elements of a multiplier circuit on its stability and the spectrum of the output oscillations. Two equivalent circuits of an aperiodic multiplier are shown: 1) Series, where $u = U \cos \omega t$, $i = I \cos n\omega t$; and 2) Parallel, where $u = U \cos n\omega t$, $i = I \cos \omega t$. In the paper the series-type frequency multiplier is studied. However, from considerations of duality, the results of the analysis conducted can be extended to the parallel type. 1 tab. 1 fig. 9 ref. Received, 6 December 1971.

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USSR

UDC $\Delta 621.3.032.269.1$

BOGDANOVICH, B. Yu., VORONKOV, R. M., GASS, V. F., and DANILICHEV, V. A.

"Autoelectronic Beam for Linear Electron Accelerators"

Moscow, Priory i Tekhnika Eksperimenta, No. 1, January-February, 1971, pp 44-46

Abstract: The authors present the results of their measurements of electron beam parameters from a gun designed to inject electron bunches throughout a phase of 30-40° and with an energy of 300-400 keV in the accelerating section, with a constant phase velocity equal to that of light and a field intensity of 100 kV/cm. They also describe the equipment they used to make these measurements. A cross-sectional drawing of the electron gun in this device is given and its dimensions specified. A "Nord-10" and a "Nord-100," both of them electric discharge pumps, were used to obtain the required degree of evacuation, which was from $2 \cdot 10^{-6}$ to $5 \cdot 10^{-6}$ mm Hg for the first experimental run. A block diagram of the entire equipment is given as well as curves for the equipment characteristics and for the results obtained. All measurements, lasting for 20 hours, were made with the same cathode, which underwent no change in dimensions. 1/1

Acc. Nr.: **AP0029510**

Ref. Code: UR 0240

PRIMARY SOURCE: Gigiyena i Sanitariya, 1970, Nr 1, pp 61-66

FEATURES TO PECULIAR GLOBAL CESIUM-137
AND STRONTIUM-90 REACHING THE POPULATION
OF POLECIA BY DIFFERENT FOOD SUPPLY ROUTES

A. N. Marey, R. M. Barkhudarov, V. K. Chumak, E. V. Fetukhova,
E. B. Tyuryukanova, G. A. Kuznetsova, N. Ya. Novikova,
S. B. Pozhivilova, G. A. Bogdanovich

The paper presents investigation data on the order of passage of abovementioned isotopes from the soil into food products with due regard for the soil nature and the accumulation of isotopes in the human body. The finding was that the extent of the passage of cesium-137 from the soil into food products fluctuated considerably and depended on the type of soil. Thus, in a soil consisting mainly of a sand fraction the passage of cesium-137 was more pronounced. Similar observation were made in respect to all of the objects examined. However, no differences in the migration of strontium-90 could be detected. Due to the high passage of cesium-137 into food products its content in the human body was high as well.

REEL/FRAME

004111

1/2 018 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--COMPLEX STRUCTURE AND SURFACE ENERGY OF BINARY METALLIC MELTS -U-
AUTHOR--(04)-VOROBYEV, YU.P., BOGDANOVICH, M.P., MEN, A.N., CHUFAROV, G.I.
COUNTRY OF INFO--USSR
SOURCE--FIZ. METAL METALLOVED. 1970, 29(2), 445-8
DATE PUBLISHED-----70
SUBJECT AREAS--MATERIALS
TOPIC TAGS--LIQUID BINARY ALLOY, SURFACE TENSION, FLUID STRUCTURE, SURFACE
ENERGY, ALLOY COMPOSITION, MODEL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3003/0355 STEP NO--UR/0126/70/029/002/0445/0448
CIRC ACCESSION NO--AP0129587
UNCLASSIFIED

2/2 018

UNCLASSIFIED

PROCESSING DATE--27NOV70

CIRC ACCESSION NO--AP0129587

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. AN INTERPRETATION WAS PERFORMED OF CONCN. DEPENDENCE OF SURFACE TENSION OF BINARY METALLIC MELTS IN A COMPLEX MODEL. THE NONPARTICIPATION OF INTRACOMPLEX BINDING ENERGIES IN THE TOTAL SURFACE TENSION OF THE MELT AND THE DEVELOPMENT IN THE SURFACE TENSION OF ONLY WEAKER INTERACTIONS BETWEEN THE COMPLEXES AND THE ATOMS OF THE REDISUAL COMPONENT WERE ASSUMED IN THIS INTERPRETATION. THE PARAMETERS FOUND FOR SEVERAL SYSTEMS ARE TABULATED. IN THE OPINION OF THE AUTHORS, THE PROPOSED MODEL FOR THE STRUCTURE OF BINARY METALLIC MELTS IS RATHER GENERAL, AT LEAST AT 1ST GLANCE. THE FOLLOWING SYSTEMS WERE CONSIDERED: PD,NI, PD,CO, PD,CU, SN,CI, AND SN,PB. FOR THE SN,BI SYSTEM, THE COEFF. OF THE WEAKENING OF THE BI,BI BOND WAS EQUAL TO ZERO.

FACILITY: INST. MET., SVERDLOVSK, USSR.

UNCLASSIFIED

1/2 029
TITLE--THEORY OF PHASES OF VARIABLE COMPOSITION AND DEFECT CONTENT -U-
AUTHOR--(04)-MEN, A.N., BOGDANOVICH, M.P., VOROBYEV, YU.P., CHUFAROV, G.I.
COUNTRY OF INFO--USSR
SOURCE--IZV. AKAD. NAUK SSSR, METAL. 1970, (2), 135-43
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS
TOPIC TAGS--PHASE COMPOSITION, CRYSTAL DEFECT, METAL PROPERTY, MATHEMATIC
MODEL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--2000/1233
STEP NO--UR/0370/70/000/002/0135/0143
UNCLASSIFIED
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20124897

2/2 029
CIRC ACCESSION NO--AP0124887

UNCLASSIFIED

PROCESSING DATE--27NOV70

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. A MATHEMATICAL TREATMENT OF PHENOMENOL. THEORY OF PHASES OF VARIABLE COMPN. AND VARIABLE DEFECT CONTENT WAS CARRIED OUT IN ORDER TO INTERPRET THE PROPERTIES OF THE PHASES. THE TREATMENT IS BASED ON THE REPRESENTATION OF A REAL SYSTEM CONSISTING OF NONINTERACTING SUBSYSTEMS (CLUSTER COMPONENTS), EACH OF WHICH FORMS A DEFINITE PART OF THE PROPERTY OF THE SYSTEM IN QUESTION.

UNCLASSIFIED

UDC: 532.529

USSR

BOGDANOVICH, S.YA., GUSEYNOV, CH.S. and SHEVSKIY, A.I.

"Dispersed Composition of Aerosol in Natural Gas Flow Under Various Pressures"

Odessa, 11-ya Vses. Konf. po. Vopr. Ispareniya, Goreniya i Gaz. Dinamiki Dispersn. Sistem, 1972 (11-th All-Union Conference on Problems of Evaporation, Combustion and Gas Dynamics of Dispersion Systems, 1972), 1972, p 19 (from Referativnyy Zhurnal-Mekhanika, 1973, Abstract No 2B1223)

Translation: Results are described of the analysis of experimental data on pressure effects on the process of droplet formation in natural gas. The dispersed composition of droplets at different pressures and flow velocities was measured by K.S. Shifrin optical method. It is shown that V.G. Levich relation between droplet size and flow velocity is true for natural gas, the coefficient of proportionality for this relation is determined and a single curve of droplet distribution in nondimensional form is plotted. Since the droplet size depends on the surface tension of the liquid at its boundary with gas, a test installation was prepared based on the method of maximum gas bubble pressure,

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